Amendments to the Claims:

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Currently amended) A method of producing an analytical tool comprising a substrate made of a polymer material and formed with a groove for moving a sample liquid, and a cover bonded to the substrate to cover the groove,

the method comprising:

hydrophilically treating the cover before the cover is bonded to the substrate;

hydrophilically treating an inner surface of the groove of the substrate; and [[,]]

bonding the hydrophilized cover to the hydrophilized substrate;

wherein the hydrophilization for the cover comprises ultraviolet radiation or application of a surface-active agent to the cover;

wherein the hydrophilization for the substrate includes a primary modifying step for primarily modifying characteristics of the inner surface of the groove by bringing a modifying gas into contact with the inner surface of the groove, and a secondary modifying step for secondarily modifying the characteristics of the inner surface of the groove.

2. (Currently amended) The analytical tool producing method according to claim 1, wherein the hydrophilization treatment for the substrate includes introducing a carboxyl group to make the inner surface of the groove hydrophilic.

3. (Original) The analytical tool producing method according to claim 1, wherein the modifying gas contains fluorine gas and oxygen gas.

4. (Original) The analytical tool producing method according to claim 3, wherein mixing ratio of the fluorine gas and the oxygen gas is 1:1~1000 on a volume basis.

5. (Original) The analytical tool producing method according to claim 4, wherein mixing ratio of the fluorine gas and the oxygen gas is 1:10~20 on a volume basis.

6. (Original) The analytical tool producing method according to claim 1, wherein the primary modifying step is performed for 1~60 minutes under conditions where partial pressure of the modifying gas is maintained at 10~2000 hPa and temperature is maintained at 0~100 °C.

7. (Original) The analytical tool producing method according to claim 6, wherein the partial pressure of the modifying gas is maintained at 100~1100 hPa and the temperature is maintained at 0~40 °C.

8. (Original) The analytical tool producing method according to claim 1, wherein the secondary modifying step comprises bringing water or water vapor into contact with the inner surface of the groove.

9. (Original) The analytical tool producing method according to claim 8, wherein the bringing of water or water vapor into contact with the inner surface of the groove comprises spraying water or water vapor to an inner surface of the substrate.

10. (Original) The analytical tool producing method according to claim 8, wherein the bringing of water or water vapor into contact with the inner surface of the groove comprises immersing the substrate in a water bath.

11. (Original) The analytical tool producing method according to claim 8, wherein the bringing of water or water vapor into contact with the inner surface of the groove comprises leaving the substrate in air.

12. (Original) The analytical tool producing method according to claim 11, wherein the air is positively caused to contain moisture.

13. (Currently amended) The analytical tool producing method according to claim 1, wherein the hydrophilization treatment for the substrate is so performed that a contact angle of pure water at the inner surface of the groove becomes 0~80 degrees.

14. (Original) The analytical tool producing method according to claim 13, wherein the contact angle is 0~60 degrees.

15. (Original) The analytical tool producing method according to claim 1, wherein the analytical tool is designed to move the sample liquid by capillary action.

16. (Original) The analytical tool producing method according to claim 15, wherein the groove has a principal, rectangular cross section which has a width W of 10~500 μm and a depth D of 5~500 μm and which satisfies $D/W \geq 0.5$.

17-18. (Canceled)